

Translation

PATENT COOPERATION TREATY

PCT/JP2003/012504



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference<br>SF-980  | FOR FURTHER ACTION   | See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) |
| International application No.<br>PCT/JP2003/012504   | International filing date (day/month/year)<br>30 September 2003 (30.09.2003) | Priority date (day/month/year)<br>30 September 2002 (30.09.2002)                                    |
| International Patent Classification (IPC) or national classification and IPC<br>G01N 27/22 |  |   |
| Applicant<br>MITSUI MINING & SMELTING CO., LTD.  |  |   |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
- This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
- These annexes consist of a total of \_\_\_\_\_ sheets.
3. This report contains indications relating to the following items:
- I  Basis of the report
- II  Priority
- III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

|   |  |
|---|--|
| Date of submission of the demand<br>05 December 2003 (05.12.2003) | Date of completion of this report<br>06 July 2004 (06.07.2004) |
| Name and mailing address of the IPEA/JP                           | Authorized officer   |
| Facsimile No.   | Telephone No.  |

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP2003/012504

## I. Basis of the report

## 1. With regard to the elements of the international application:\*

 the international application as originally filed the description:

pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

 the claims:

pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, as amended (together with any statement under Article 19)  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

 the drawings:

pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

 the sequence listing part of the description:

pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4.  The amendments have resulted in the cancellation of:

- the description, pages \_\_\_\_\_
- the claims, Nos. \_\_\_\_\_
- the drawings, sheets/fig \_\_\_\_\_

5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP03/12504

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

|                               |        |            |     |
|-------------------------------|--------|------------|-----|
| Novelty (N)                   | Claims | 1-9, 11-21 | YES |
|                               | Claim  | 10         | NO  |
| Inventive step (IS)           | Claims |            | YES |
|                               | Claims | 1-21       | NO  |
| Industrial applicability (IA) | Claims | 1-21       | YES |
|                               | Claims |            | NO  |

**2. Citations and explanations**

Document 1: Norio Mitsuma, et al., Seiden Yoryoshiki Alcohol Nodo Sensor, Society of Automotive Engineers of Japan Gakujutsu Koenkai Mae Satsushu, 01 October 1993 (01.10.93), No. 936, pages 257-260

Document 2: JP, 4-350550, A (NGK SPARK PLUG CO., LTD.), 04 December 1992

Document 3: JP, 9-503062, A (SIEMENS AG.), 25 March 1997

Document 4: JP, 2002-513930, A (SIEMENS AG.), 14 May 2002

Document 1 cited in the ISR describes an alcohol concentration detector that detects alcohol concentration in a test liquid by measuring changes in relative permittivity of the test liquid between electrodes through the transmission frequency.

**Re the Invention of Claims 1 and 9 / Documents 1-3**

A capacitance sensor body with an electrode formed on the surface of an insulating base sheet and the surface of the electrode covered by an insulating resin layer is already well known, as indicated by the description in document 2 cited in the ISR, and employing the aforesaid known capacitance sensor body as a capacitance sensor body in the invention described in document 1 is not found to present any special difficulty.

Also, employing a known resin material as an insulating member for an insulating base sheet is not found to give this application any special operation or effect.

Therefore the subject matter of claims 1 and 9 could easily be conceived by a person skilled in the art using the invention described in document 1 and the aforesaid previously known art.

**Re the Invention of Claim 2 / Documents 1-3**

Gluing and fixing the sensor body to the base is not found to give this application any special operation or effect.

Therefore the subject matter of claim 2 could easily be conceived by a person skilled in the art using the invention described in document 1 and the aforesaid previously known art.

**Re the Invention of Claims 3 and 4 / Documents 1-3**

Using etching in order to form an electrode on a base and forming a sensor electrode pair in a comb pattern are already well-known (for example, see document 3 cited in the ISR). Forming an electrode by etching or forming an electrode in a comb pattern in the invention described in document 3 is not found to present any special difficulty.

Therefore the subject matter of claims 3 and 4 could easily be conceived by a person skilled in the art using the invention described in document 1 and the aforesaid previously known art.

**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

International application No.

PCT/JP03/12504

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

Claim 10 says "said test liquid", but claim 10 is an independent claim and the "test liquid" is not described previously.

**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

International application No.

PCT/JP03/12504

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient).

**Continuation of Box V:****Re the Invention of Claims 5-8 / Documents 1-4**

Using the chemical vapor deposition method in order to form a layer is commonly used art. (If necessary, see claim 5, etc. of document 4 cited in the ISR.)

Therefore the subject matter of claims 5-8 could easily be conceived by a person skilled in the art using the invention described in document 1 and the aforesaid previously known art.

**Re the Invention of Claim 10 / Document 1**

The invention of claim 10 and the invention described in document 1 have no special differences in their constitution.

Furthermore, claim 10 says "said test liquid", but claim 10 is an independent claim so we would like to note that the "test liquid" is not described previously.

**Re the Invention of Claims 11-16 / Documents 1-3**

Technology for forming an electrode on a base by the photoresist method is already well known (for example, see document 3). Employing the aforesaid well-known technology in the invention described in document 1 too in order to form an electrode is not found to present any special difficulty.

Also, using a polyimide resin as the base material or employing copper as an electrode material is not found to give this application any special operation or effect.

Therefore the subject matter of claims 11-16 could easily be conceived by a person skilled in the art using the invention described in document 1 and the aforesaid previously known art.

**Re the Invention of Claims 17-21 / Document 1-4**

Employing materials such as ceramic, glass, resin plates, etc. as a base or employing materials such as platinum, nickel, copper, titanium, etc. as an electrode is not found to give this application any special operation or effect.

Therefore the subject matter of claims 17-21 could easily be conceived by a person skilled in the art using the invention described in document 1 and the aforesaid previously known art.